



Department of Energy

Oak Ridge Operations

P. O. Box E

Oak Ridge, Tennessee 37831

February 18, 1988

Mr. J. D. Overstreet
Regional Administrator
Federal Emergency Management Agency
Region VII
911 Walnut Street, Room 300
Kansas City, MO 64106



S00183634
SUPERFUND RECORDS

Dear Mr. Overstreet:

RADIOACTIVE FILL - HAZELWOOD, MISSOURI - EXECUTIVE ORDER 11988

The purpose of this letter is to provide a response to your letters of January 12, and February 12, 1988, subject as above, and present the Department of Energy's position concerning the soil in the Coldwater Creek Floodway. We apologize for the delay in our response and assure you that we have great concern for issues within FEMA's purview, but we must balance competing considerations, statutes and responsibilities, all of which we take very seriously. Therefore, the intent throughout our involvement in this matter has been to do what is most reasonable while affording maximum protection to the environment and the local population.

By way of background, the surface of the floodplain in the area of Latty Avenue and Coldwater Creek became contaminated with low levels of thorium, radium, and uranium as a result of uranium processing being done in the St. Louis area as part of the war effort during the 1940's. The soil in question (approximately 3700 cubic yards) was placed in the floodway by the City of Berkeley's construction contractor during improvements along Latty Avenue in 1986. It was placed in the floodway to provide access for equipment to the outfall of the stormwater drain, being installed at the time. The soil is presently stabilized with vegetation and is slightly contaminated (lower levels than those measured at the original floodplain surface) with thorium-230, also resulting from the same uranium processing activities.

In cooperation with the cities of Berkeley and Hazelwood, the Department of Energy has been working with the U. S. Army Corps of Engineers and has completed a study which indicates current maximum flood levels are actually less than those originally calculated by FEMA. The Corps' computations used actual survey data collected before and after the soil was placed; whereas, the original determinations of flood levels were computed using interpolated survey data in this particular area. Calculations made after the soil was placed in the floodway resulted in a 0.05 foot increase in the flood level using the interpolated data; when actual data are used, the flood level is lower than the original level using interpolated data.

It is DOE's understanding that you have indicated that you would consider a petition by the City of Hazelwood to relocate the floodway so that the contaminated dirt would be outside the floodway. The Corp of Engineers is completing calculations to determine if the floodway relocation is possible, and the City of Hazelwood is pursuing this action.

It is DOE's position that this material does not pose a short-term (100 years) risk to human health and safety or to the environment, in flood or non-flood conditions. This position is supported by calculations which were made by Bechtel National, Inc., using very conservative assumptions to determine the risk from exposure to thorium-230 (a worst case scenario). Based on these conservative assumptions, the calculations indicate that direct radiation exposure from or inhalation of, the soil would not exceed the DOE radiation protection standard for the general public (100 millirem per year). For exposure from ingestion, depending on the concentration of thorium-230 obtained, a mass of soil ranging from 2 to 20 pounds would need to be consumed before the standard would be reached.

Based on these calculations, it is DOE's position that the most reasonable short-term option for this material is to leave it in place. The original soil surrounding and underlying the soil in question is contaminated with higher levels of thorium-230. Removal of the soil in question would disturb the original contaminated soil, allowing easier migration of higher level contamination to surrounding areas.

Since this material and the surrounding soil does not pose an immediate risk to human health and safety or the environment, we believe the appropriate action is to complete an environmental review and analysis process agreed to by EPA. This would take place in conjunction with field studies and evaluations of disposal alternatives.

An appropriate action could then be agreed upon, with full consideration for protection of the environment and minimizing risk to humans. We believe any immediate action (such as removal) could ultimately turn out to be undesirable.

DOE is aware of the provisions of Executive Order 11988 and believes that to best meet the intent of EO 11988, this material should be left in place and undisturbed until the appropriate environmental review and analysis process is completed. We, of course, invite FEMA participation in the process.

Mr. J. D. Overstreet

-3-

If you have any questions concerning this matter, please contact
Mr. Andy Avel at 615-576-0844.

Sincerely,

James A. Smithwick for
Joe La Grone
Manager

cc: Mayor Palmer, Hazelwood
J. Zerega, COE
J. Chen, EPA
R. Egli, SE-30
W. Hibbitts, SE-31

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CMPL SECTION